













Db	3789	GCCCATGGCTGACCGCTGCCGTGACCCAAAGAAGGGCTGACGCTCAGCTTCTCAT	3848
Qy	3702	- - - - -	3701
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Qy	3702	- - - - -	3749
Db	3909	GGACCACTTCAGAGGAGCACCTTCCTCCCTGGGCAACAAACCCGTCGCGCT	3968
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Qy	3810	acagagaacatggggaggatctccggaaacccgcaacactggcccaaccatcacacacct	3869
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Qy	3990	tcccttaaacggcccttcctggggacccatctgtttaaccactgtccatccggggggaa	4049
Db	4209	TCCCCMTANGCTCTCTGGGGCAAGC-TCGNCIAACCCCTGTCCATTCCAGGGGA	4267
Qy	4050	9agtggggacccttcacggccatggcccttcaccccaaggacaccatccaaacccctt	4109
Db	4268	GAAGGGGCCCTCAGCTGCCCTTCACCCAGACACCCACTAACCCACACAGACCCRT	4327
Qy	4110	cacttgtgggtgtcatccatctt	4134
Db	4328	CACTCTGGGGTGTCTATCCCCATCT	4352

Log No. 3

RESULT 4

ORIGIN

Query Match 89.0% Score 3680.4; DB 74; Length 4063;  
Best Local Similarity 99.9%; Pred. No. 0;

Matches 3692; Conservative 0; Mismatches 1; Indels 1; Gaps 1;

卷之三

D<sub>b</sub> 371 GAATACCACTTGGGTCGCTCGAGGAAGAGTGTCCCC - GGGGGAAACAGTTACAGCAT 429

卷之三

Db	430	GGAAAGCCGCCCGGCTGCGCCCTTCGGCCCTTCGCAAGGGTCCCTGAGCCGGAGGCTAAA	489
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231 aagctccatcaaacqqtacaaaacttcacaacccaaacttggaccqqaccqaccqaccqaccqacc 290  
Ov

卷之三

DB<sub>b</sub> 498 AAGCTCCATCAAACGTACAAAAGTCACAACCCCAAAACCTTGACCGGACCCAGGTTTCGACA 549

291 gatccgtgcctcgcttccggaaagtgcattggccggctgtcagagcttc 350  
oxy

卷之三

DB 550 GATCCTCCCTGGCTTCCGAAGTGCTGACCATGACCGGGGGGGATGCAAGCTCAA D9Y

oy 351 99agttctactccatgaggatcccaggatgtgcgtggggcttggagct 410

卷之三

610 GCACTICALTCCUAGAGTCCTGAGTCAGACUGGCTGGACCT 809  
620

QY 411 caacctggatgaagactccattataaaggccaggcacacgctccatcctggccagggtt 470

卷之三

QY 471 ctgctttgaggtaacaacatcgctctgggacaaaatgttttgccgtcggtctgcaggcga 530

卷之三







ERRLLSQEEQTSK LLMWV LLLPQV  
PAMAEPPI.PEPKKRLLDAORGSEFPPTWVQQTRV

## 241 GlyAspThrValPhe<sup>n</sup>ArgLys<sup>m</sup>

557	RSARG9	leuThrleuThrleuAlaAlaAlaAsnLeuAlaAsnPro	574
1933	CTAACGACCCCTCACCCCTCATGCCAAGGTATCAGAACTCTGGCAACT	1982	
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1983	TTTCCAGTTTACCTCAAGGACTTCCTGCTGGGTTCTATCGAAATTCTGTATGATTCAA	2032	
591	LenglueLeuGluIrpGlySerMetGlnGlnPheLeuTyrglyIleSerAs	607	
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607	nieAspThrLeuThrAsnSerSerSerPheGluGlyItyrIleAspLeug	624	
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624	IyargGluLeuSerThrLeuHisAlaLeutTrpGluValLeuProGlyIn	640	
2133	GCGCGGAGCTCTCACACCTCACACCTCACACCTCACACCTCACACCT	2182	
641	LeuSerLysGluAlaLeuLeuLysLeuGlyProLeuProArgLeuLeu	657	
2183	CTTACAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGGAGG	2232	
657	raspIleSerThrAlaLeuIargArgAsnProAsnIleGlnArgGlnProSerA	674	
2233	CGCATAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGC	2282	
674	rginSerGluArgAlaArgSerGlnProMetValLeuArgGlyProSer	690	
2283	CGACAGCGACCGCCGCGTCGTCGTCAGCCCATGCTGCGGGGGGTCGA	2332	
691	AlaGluMetGlnGlyTyrMetMetArgAspLeuAnsSerSerIleAspLe	707	
2333	GCCGAGATGTCAGGGTACATGATGTCAGGGGACACTCAACAGCTTCATCGGCT	2382	
707	ugInserPheMetAlaArgGlyLeuAnsSerSerMetAspNetaLaargL	724	
2383	TCTAGCTCTTCATGCTGCTGAGGGCTCAACAGCTCATGATGCTGCCTGC	2432	
724	euroProSerProThrlysGluIlysProProProProGlyGlyGly	740	
2433	TCCCTCTCCCCAACAGGAAACCCGGCCCTCCGGTGGGGT	2482	
741	LysAspLeuIpheTerValSerArgProProLeuAlaArgSerSerProAl	757	
2483	AAGACCTGTTCATGTCATGTCATGTCATGTCATGTCATGTCATGTC	2532	
757	tryrCystThrSerSerAspIleTerIgluProGluIlysMetLeu	774	
2533	ATCATGAGGAGCACCTCGAACATCACAGGGGAGCAAGAGCTGCTGA	2582	
774	erValAsnLysSerValSerMetLeuAspLeuglnGlyAspGlyProGly	790	
2583	GTCACARAGTGTTACMGAGTNGTCATGTCATGTCATGTCATGTCATG	2632	
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2633	GGCGGGCTTAACMGAGTNGTCATGTCATGTCATGTCATGTCATGTCATG	2732	
807	oleUhrHsSerSerGlnAlaSerLeuThrAlaAlaLeuGlyLeuArgProA	824	
2683	GRWGCAGCTCAAGCCAGGCTCACTGACAGCAGCTTGGCTTGGCCCTG	2732	
824	IarrnaIaGlyIarIaIuSerGlnIySrglySerSerIlethrAlaAla	840	
2733	CACTGCGGSGCGCTCTCCCAAGGGAGTGGCTTCATCACACAGCC	2782	
841	GlyMetArgLeuSerGlnIneGlyValThrThrAspGlyValProAlaG	857	
2734	GAAATGATGATGATGATGATGATGATGATGATGATGATGATGATGATG	2812	



uS-09-2

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Sogto Ni's

RESULT	4	DOI	No.: S-0970
AF048976	AF048976	4063 bp	mRNA
LOCUS	Rattus norvegicus	synaptic ras	GTPase-activating protein p135
DEFINITION	SyngAP mRNA, complete cds.		
ACCESSION	AF048976		
VERSION	AF048976.1	GI:	2935447
KEYWORDS			
SOURCE	Rattus norvegicus		
ORGANISM	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;		
	Mammalia; Butheria; Rodentia; Sclurognathii; Muridae; Murinae;		
	Rattus.		
REFERENCE	1	(bases 1 to 4063)	
AUTHORS	Chen H.-J. and Kennedy M.B.		
TITLE	Identification and cloning of a novel 130 kd protein containing a		
	ras GTPase-activating domain from the rat forebrain postsynaptic		
	density		
JOURNAL	(in) SOC. NEUROSCI. ABSTR. :	1466;(1997)	
REFERENCE	2	(bases 1 to 4063)	
AUTHORS	Chen, H.-J., Rojas-Soto, M. and Kennedy, M.B.		
TITLE	A synaptic ras GTPase-activating protein (p135 SyngAP) inhibited by		

JOURNAL OF CELLULAR PHYSIOLOGY, 170, 312-315 (1997)  
© 1997 by John Wiley & Sons, Inc.  
CCC 0021-972X/97/020312-04

FEATURES	SOURCE
Location/Qualifiers	1. -4163 "Organism" "Strattus norvegicus" "strain" "Sprague-Dawley"

CDS  
/db\_xref="taxon:10116"  
122 . 4003  
"function" "prominent substrate for endogenous CamKII; can  
act both in intrinsic ras GTPase activity"  
"notes" "Synaptic ras-GAP; N-terminal encodes putative "H  
domain", C2 domain, and ras GAP domain; C-terminal encodes  
T/SX motif; enriched in the forebrain postsynaptic  
density fraction"  
*London, et al., 2001*

Human RBD product - Syngap1c has GTPase activating protein activity.

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Query Match Score 3601.4; DB 74; Length 4063;
Best Local Similarity 99.6%; Pred. No. 0;
Matches 3611; Conservative 0; Mismatches 16; Indels 0; G

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4016	CGGCTGAGATCACAGAGAACGCTTCCTGACGGAGACGGAGAACCACT 4065				
1230	SerProProSerIleThrAspLeuIleProCysAlaProProTyroProGlyPyr 1246				
4066	AGCCCAACCCAGCAGCTACAGAACCTTCCTGACCTTAACCCGGCC 4115				
1246	oProSerValThrAspLeuIleProSerAlaProAspProGlyThrSerP 1263				
4116	ACCAGGGTCAGACTCTCCAGCAGCTTCAGCAGGCCGACCTCTGGACATAC 4165				
1263	roProThrThrArgGlyArgHisGlnGlyThrAlaGlyLeuSerProLeu 1279				
4166	CAACCAAGGACTGAGCTGAGCACAAGGAGAAGGGATGTCGCCCTRA 4215				
1280	ThrProProTrpGlyThrHisLeuSerThrProLeuThrProLeuHisArgR 1296				
4216	ACGCCTCTGGGGACGCTCTGTCACAGTCGTCATGCCAGAG 4264				
1296	gGluSerGlyThrLeuSerGlyProLeuThrProGlyHisHisLeuPro 1313				
4265	GGAGAGGGACCCCTCATGGCCCTCTGACGCCCTCTACCCCGAGACCACTACCC 4314				
1313	isThrAppProPheThrLeuGlyCysThrProHisPro 1325				
4315	ACAGACGCCCTCATCTGGGNGCTPATCCCACTCT 4325				
<i>Back to the Section 6</i>					
seq_name:	gb_ro:AF048976				
seq_documentation:	block:				
LOCUS	AF048976	4063 bp	mRNA	ROD	27-MAR-1998
DEFINITION	Ratius norvegicus synaptic ras GTPase-activating protein P135				
SYNOPSIS	MRNA, complete cds.				
ACCESSION	AF048976				
VERSION	AF048976_1				
KEYWORDS					
SOURCE	Norway rat.				
ORGANISM	Ratius norvegicus				
	Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;				
	Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;				
Rattus.					
REFERENCE	Chen, H.-J. and Kennedy, M. B.				
AUTHORS	1. (bases 1 to 4063)				
TITLE	Identification and cloning of a novel 130 kd protein containing a				
	ras GTPase-activating domain from the rat forebrain postsynaptic				
	density				
JOURNAL	(In SOC. NEUROSCI. ABSTR.: 1466;(1997)				
REFERENCE	2. (bases 1 to 4063)				
AUTHORS	Chen, H.-J., Rojas-Soto, N., and Kennedy, M. B.				
TITLE	A synaptic ras GTPase-activating protein (p135 SynGAP) inhibited by				
JOURNAL	CAM kinase II.				
REFERENCE	Unpublished				
AUTHORS	3. (bases 1 to 4063)				
TITLE	Chen, H.-J. and Kennedy, M. B.				
JOURNAL	Direct Submission				
SUBMITTED (17-FEB-1998) Division of Biology, California Institute					
of Technology, 1200 E. California Blvd., MC 216-76, Pasadena, CA					
91125, USA					
FEATURES	Location/Qualifiers				
source	1. .4063				
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	/strain="Sprague-Dawley"				
	/db_xref="Laxon:10116"				
CDS	122..4003				







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5	OATH	3

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